

A Comprehensive floristic study of Van-Vihar National park Bhopal (M.P)

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Abstract- Van vihar in the state capital Bhopal is highly rich in floristic biodiversity of plants. Due to recent drastic changes after urbanization and industrialization have affect the Flora of Van vihar National park. In review of it after studied it is necessary to update and revise the flora of Van vihar National park. It has some hilly Tracks covered with luxuriant vegetation along with the forest area represented by deciduous spare forest. Taxonomical investigations were under taken to explore the floristic status of the ten dominant families. Conservation measures were also taken in account

Keywords: Floristic study, Dominant families, endangered taxa, conservation

I. INTRODUCTION

The awareness about and information on the floristic composition is inevitable for understanding the ecosystem of any given region. In fact, the inadequacy in taxonomic investigations has been a limiting factor in the study of tropical ecology (Hedberg, 1971). Most of the floristic in India were published during the last quarter of the nineteenth century. Several floristic accounts have been presented for different regions of state and includes those of Brandis (1874), Wood (1902), Hole (1904). While the composition of regional floristic has undergone a significant change under physical and biotic pressures over the years, the efforts to assess the current status of plant diversity have remained merge in the country . A number of species are endangered of survival and some have already been lost by the country. However recent urbanization, population exposition affect the flora of Van vihar National park. So, the main focused on comprehensive taxonomic biodiversity and conservation of view. It is necessary to explore existing floristic structure of Van Vihar update and revise the earlier data since several areas have either remained botanically unexplored or are underexplored

II. RELATED WORK

The related work includes those by Chaghtai and Ahmad (1977). Oommachan (1977), Khan and Chaghtai (1979), Khan (1980), Chaghtai and Garg (1981), Ahmad and Chaghtai(1982),Tiwari (1955), Narayanaswami and Rao (1969), Khan et al (1982), Khan and Chaghtai (1985) Khan et al (1989), S.S. Khan and Dolly Malhotra (2002)

III. METHODOLOGY

Field visits were undertaken at different seasons and collect the digital photographs in natural habit and plant specimen for observation, identification and data preparation in the laboratory during the study period. The plant specimen were identified with the help of different floras viz- Flora of India Hooker, (1872- 1897) flora of Bhopal, Oommachand (1977) Khan (1993). The herbarium was prepared for identification and nomenclature of species. The digital images were attached to the respective plant description. Various experts were also consulted for identification their systematic position and nomenclature of the species, genera and families and other literature

IV. RESULTS AND DISCUSSION

The study identified 123 species belonging to 96 genera and 56 families out of these 94 species 69 genera belonging to 41 families of dicotyledonous, were as 29 species belonging to 27 genera and 15 families .The overall families to genera ratio is 1:1.28. Dicot to monocot family ratio is 2.73:1, where recording from Van Vihar National park. Some of the important conclusions emerging out of the investigations are presented.

1. Position of ten dominant species: - As per Hooker (1872-79), the Orchidaceae ranks first position among the Flowering plant families in India and fallowed by Fabaceae. The Latter is the most dominant family in Bhopal. The Ten dominant families of India and those of Bhopal are in table (1). In none of these studies the family Orchidaceae does not find any place among ten dominant families, were as it

occupies the top most position in Hooker’s Flora of British India. Fabaceae has unchanged position both in Hooker’s, Oommachan’s and Khans work. Poaceae ranks 111, Asteraceae finds 7th position in British India Occupies 2nd in flora of Bhopal (Oommachan,1977 and Khans 1993) in present investigation Poaceae is at 1th position were as in flora of British India, Oommachan, Khans studies presents at 3rd position. The position of other families in comprasion with these studies shows that the family Ebenaceae does not take any place in these studies but it takes 10th position in current investigation.

2. Endangered species

1. Asphodelus tenuifolius Cav.
2. Cochlospermum religiosum L.
3. Helicteres isora L.
4. Oroxyllum indicum L.
5. Dioscorea bulbifera L.

3. Exotic species

1. Annona squamosa L.
2. Alternanthera pungens H.B.K
3. Gomphrena celosioides Mart.
4. Passiflora foetida L.
5. Lantana camara L.

V. CONCLUSION AND FUTURE SCOPE

The flora of the study were compared to early flora as Hookers (1872-97). Oommachan, (1977), Khans (1993) resulting the ten dominant families of the study area are Leguminosae, Poeaceae, Asteraceae, Amaranthaceae, Arecaceae, Rhamnacee, Malvaceae, Sapotaceae, Cyperaceae, Combretaceae. The revision of the flora of study area indicates the rich biodiversity region of medicinal and economically important plants which should be conserve for the feature generations by revision of the flora time to time

Table 1

Angiospermic	Estimated representation of angiosperms in Bhopal flora Number of estimated by		
	Oommachan (1977)	S.S. khan (2002)	Authors
Families	121	129	41
Dicots			
Monocots	27	32	15
Total	148	161	56
Genera	436	503	69
Dicots			
Monocots	108	132	27
Total	544	635	96
Species	688	818	94
Dicots			
Monocots	148	201	29
Total	836	1019	123

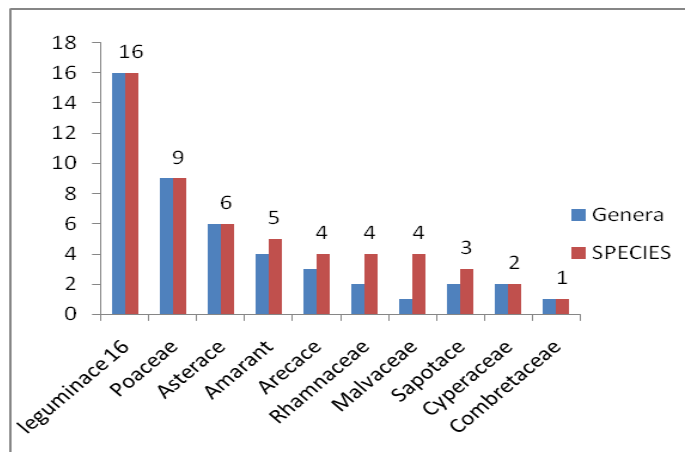


Figure .1

Table. 2

Angiospermic	Position of ten dominant species	
India	Bhopal	
Hooker (1872-97)	Oommachan (1977)	Authors
Orchidaceae	Fabaceae	Leguminosae
Fabaceae	Asteraceae	Poeaceae
Poaceae	Poaceae	Asteraceae
Rubiaceae	Acanthaceae	Amaranthaceae
Euphorbiaceae	Euphorbiaceae	Arecaceae
Acanthaceae	Scrophulariaceae	Rhamnaceae
Asteraceae	Verbenaceae	Malvaceae
Cyperaceae	Laminaceae	Sapotaceae
Lamiaceae	Malvaceae	Cyperaceae
Urticaceae	Convolvulaceae	Combretaceae

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